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**OPTIMIZING THE ROLE OF CHARACTER EDUCATION
THROUGH SCIENCE AND TECHNOLOGY TOWARDS
EXCELLENT AND INTELLIGENT GENERATION**

MAKASSAR STATE UNIVERSITY
Thursday, 20 August, 2015

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UNIVERSITAS NEGERI MAKASSAR

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**International Conference
on Education and Technology**



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COOPERATIVE LEARNING MODEL "STUDENT TEAMS
ACHIEVEMENT DIVISIONS" EFFECT TOWARD LEARNING OUTCOMES OF
SCIENCE
PROGRAM AND INTERPERSONAL INTERACTION

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PROGRAM AND INTERPERSONAL INTERACTION

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ABSTRACT

The main problem in the study was to find out the significant difference between the results of fifth grade science learning science education in "SD Inpres Pai II Makassar" before and after learning with "STAD" cooperative learning model and a significant difference between interpersonal interactions of fifth grade students of "SD Inpres Pai II Makassar" before and after learning with "STAD" cooperative learning model. This study used a quantitative approach with "one group pretest posttest" design. The population of the study was the fifth grade students of "SD Inpres Pai II Makassar" which consisted of two classes with the number of students as many as 82 students. Experimental class was chosen by appointing one of the two classes, named class "V-A" with the number of students as many as 40 students. All subjects in the classroom "V-A" were sampled in this study. The data were collected by using test techniques, observation and documentation, while data analysis technique used was inferential statistical analysis with t-test of two paired samples. Based on the analysis with t-test of two paired samples for the study result obtained was for $10.893 > t_{table}$ of 2.0227. Thus it can be concluded that there are significant differences between the results of learning science education before and after using model "STAD". Wilcoxon sign on interpersonal interaction variables indicates Z value of $-5.377 > Z_{table}$ by 1.96 by $\alpha = 0.05$. It can be concluded that there are significant differences between students' interpersonal interaction before and after using STAD model. It means that the use of cooperative learning model "Student Teams Achievement Division" (STAD), has a significant influence in the learning outcomes of fifth grade Elementary School in learning science education in SD Inpres Pai II Makassar and the use of cooperative learning model Student Teams Achievement Division (STAD) has a significant influence to the fifth grade students' interpersonal interaction in "SD Inpres Pai II Makassar".

Keyword : cooperative learning, interpersonal interactions, STAD, the learning outcomes

A. Background

Education is an investment in human resources that has a long-term strategic value for the sustainability of human civilization in the world. The progress and development of a country in a positive direction are marked by high quality of education of the country. Recognizing the importance of education, making the

country's pioneer formulating educational goals of the state in the Guidelines of State Policy as the basis for the implementation of the education system in Indonesia. Based on the initial review in class V of "SD Inpres Pai II Makassar", class V in the academic year 2014-2015 consists of two classes, class A with a number of students as many as forty people and class B by the

same numbers. Researchers conducted a preliminary review on the "class A" with the obtained information as follows. *First*, the number of students exceeds the standard capacity of the student numbers in one class that each class should only be filled with

twenty students. *Second*, the students' average learning outcomes are still relatively low, it happens almost on all subjects, including in science education subject. *Third*, students' motivation is also tended to be low, "low motivation to learn" which has become one of the causes of low achievement in learning mastery. *Fourth*, the learning is still using traditional methods, in this case, the learning is still based on transferring knowledge and understanding the concept alone with the lecture method as the instructing method. *Fifth*, the line-shaped seating arrangement which results in boredom also reflects that in the learning process, students became the passive party who always receive knowledge from the teacher. The reason for the seating arrangement is also caused by the number of students. *Sixth*, the presence of social groups in the class whose members gather and support each other both in positive and in negative terms. *Seventh*, interpersonal relationship can be quite

harmonious, but it is only visible in learning activities, while in the learning process the individualist attitude is still present. The social relations of the students do not necessarily cover the needs of all students' discrepancy and the

troubled students is still found.

In order to make the students in the class that contains about 20-25 students with various backgrounds and abilities as well as the issues of their individual development, understanding the lessons would still be difficult for a teacher. Because in the class, each learner's comprehension is different. There are some students who are quick in grasping the lessons, some are average, some are slow. In the same class, there are students with high learning motivation, some mediocre, and some even very low motivation as well as with emotional and social conditions. For each student, there is the pattern of learning, the patient, the grumpy, the easy going and the introverted (loner). Things to remember that education is not just a knowledge transferring to students but also to build character and instill virtues. With all the limitations, teachers are required to give their best for education as their professional duty.



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Student Teams Achievements Division (STAD) learning model is one of the cooperative learning model that is successfully developed by American psychologist named Slavin together with his fellow peers at John Hopkins University. STAD cooperative learning model is the simplest and most demanded by teachers to be applied in their classrooms. STAD cooperative learning is made with the aim of building confidence that the difference is not a problem instead the difference is a key to face the problems. By utilizing the potential possessed by each student with different characteristics and the differences possessed by these students are united to achieve learning success together. Fairly well-known slogan of the STAD is a success for all and all for success.

The use of cooperative learning model type STAD is the proper method to overcome learning problems such as the inability of teachers to facilitate the learning of all students with their differences. STAD cooperative learning is a group work-based learning which is based on differences. This is in accordance with the conditions of a heterogeneous class with a variety of abilities. In addition, STAD cooperative

learning can be used on a variety of subjects, particularly subjects of natural science.

Indeed all these problems have become a concern of various related parties regarding the importance of science teaching in primary schools. In fact, reflecting on how countries like USA, Europe, and Japan are said to be developed countries not least because their societies are a society with a mastery of science and high technology. Using science and technology, they can do things that support the interests of the country ranging from defence, economics, politics, and so on. Fostering relationships among students as a social individual also should start from primary school. Regarding how hard the struggle of the heroes who fought for Indonesian independence from the invaders. Mutual cooperation, shoulder to shoulder, and cooperation make them firm up Indonesia to proclaim its independence on 17 August 1945.

Based on the research that has been done by many previous researchers about the effect of various variance of cooperative learning model to increase learning outcomes and other such effects tends to improve relations among students, admission to mainstream students and many more. Researchers moved to prove the effect

that can occur through research by analyzing the influence of cooperative learning model Student Teams Achievement Divisions (STAD) to two things: the learning outcomes of students who majored in science subjects and interpersonal interaction of students in the classroom.

The formulation of the problem is as follows:

1. Is there a positive and significant effect on learning outcomes Elementary School fifth grade science students Inpres Pai II Makassar after learning with cooperative learning model Student Teams Achievement Division (STAD)?
2. Is there a positive and significant effect on interpersonal interactions Elementary School fifth grade students Inpres Pai II Makassar after learning with cooperative learning model Student Teams Achievement Division (STAD)?

B. Results and Discussion

The data were obtained through the test results of the 40 students science class II VA SD Inpres Pai Makassar before and after treatment with STAD type of cooperative learning model, as well as the observation

results to determine the interaction of the 40 students VA who had been divided into two groups. The observations were then carried out at the beginning and the end of the learning process with the cooperative STAD.

The data obtained from the results of this study were analyzed by descriptive and inferential statistical techniques to provide information about the state of the study and research as well as to know the difference between two mean pairs of learning outcomes as well as interpersonal interaction, with first through class assumption in the form of data normality test.

1. Descriptive Analysis of Research Results

a. Descriptive Analysis Variable Learning Outcomes IPA

For the learning outcome variable IPA, researchers used a technique achievement test. The achievement test was conducted twice, before and after the study conducted by the STAD model. The results of the test from the initial study and the final study of students VA can be seen in figure .1 below.

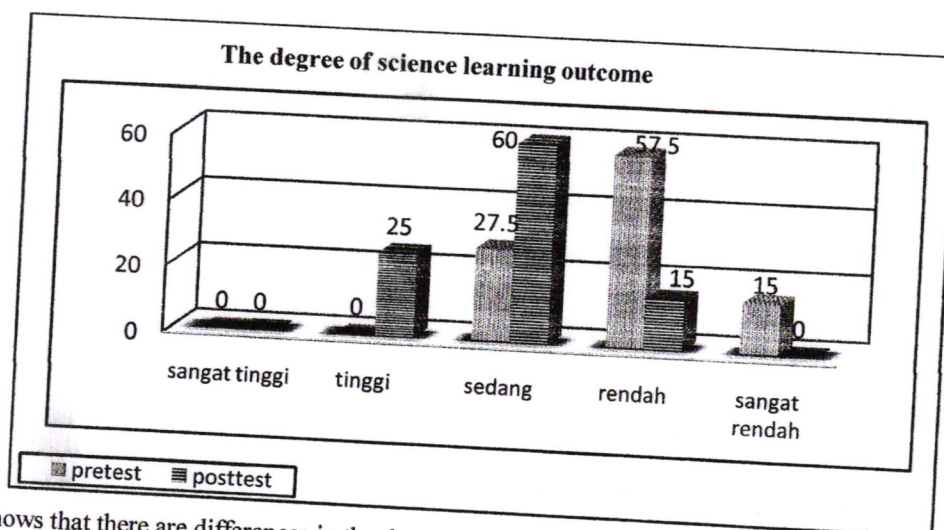


Figure .1 shows that there are differences in the degree of achievement of student learning outcomes in the initial test and final test.

The degree of achievement of learning outcomes IPA at the higher end of the test compared to the achievement of learning outcomes IPA at the beginning of the test. From the calculation of the average scores of learning outcomes, the average for the results of the initial test study is relatively low namely 34.8 with the highest score 56 and the lowest scores 12, while the average for the final test result is 54.6 categorized as moderate with the highest score 76 and 24 the lowest score.

b. Descriptive Analysis Variables Interpersonal Interaction Students

For the interpersonal interaction variables, researcher used observation techniques. Observations were conducted twice, namely at the beginning and the last meeting with STAD learning implementation. The results of data from the initial study and the final grade students VA can be seen in Figure 2 as follows: